

AM-BL2845AE Series

		Brushless Motor			Ball Bearings			
Motor Model		1215	1210	1813	1810	2412	2409	
Nominal voltage		V	12	12	18	18	24	24
No load speed ±12%		rpm	14800	10000	12520	9680	11680	9080
No load current Max 150%		mA	300	190	170	120	120	85
Recommend limit for continuous operating	Max cont. torque	mN.m	33.8	38.7	37.2	40.1	36.6	40.4
	Rated Speed	rpm	13105	8250	10913	7985	10055	7383
	Rated Current	mA	4700	3600	2900	2400	2000	1700
	Rated Power	W	46.4	33.4	42.6	33.5	38.5	31.2
Starting current		mA	38710	19672	21687	13139	13636	8727
Stall torque		mN.m	295	221	293	229	263	216
Maximum power output		W	114.3	57.9	96.1	58.0	80.4	51.3
Maximum Efficiency		%	83	81	83	82	82	81
Terminal resistance ±12%		Ω	0.31	0.61	0.83	1.37	1.76	2.75
Inductance (1KH _z)		mH	0.034	0.086	0.126	0.22	0.27	0.46
Mechanical time constant		ms	3.3	2.9	2.8	2.7	2.9	2.7
Moment of inertia		gcm ²	6.19	6.19	6.19	6.19	6.19	6.19
Torque constant		mN.m/A	7.7	11.3	13.6	17.6	19.4	25.0
Speed constant		rpm/V	1243	1324	701	543	491	382
Speed/torque gradient		rpm/mN.m	50.2	45.2	42.7	42.3	44.4	42.0
Weight		g	138.8	138.7	139.1	140.1	138.4	139.2

ADDITIONAL INFORMATION			
Motor thermal resistance:	10.2K/W	Motor thermal time constant:	822S
Axial (dynamic):	4.0 N	Radial (5mm from mounting face):	16.0 N
Press-fit force (static):	50 N	Max allowable screw depth into flange:	3.0 mm
Maximum radial play (5mm from mounting face):	≤0.02 mm	Axial play:	0 (<4.0N)
Maximum winding temperature:	125°C	Ambient temperature range:	-30 to 65°C
Standard rear shaft diameter:	4 mm	Standard rear shaft length "L":	0/3.7/5.5 mm

Connection (AWG 22#)	Total Length: L _T =L1+L2+L3				
Cable 1: Yellow Winding A	L1:28GP	L1:32GP	L2:BL28	L3:EN16S	L3:EN24T
Cable 2: Red Winding B	26.1	27.4	45.0	10.7	12.0
Cable 3: Blue Winding C	33.3	35.9			
Plug definition (AWG 28#) Molex: 51021-0500	40.5	44.4			
Plug 1: Brown Hall 3~16V					
Plug 2: Black Hall GND					
Plug 3: Yellow Hall A					
Plug 4: Red Hall B					
Plug 5: Blue Hall C					

AM-BL2845AE Combination Scheme

Recommended Gearbox:
Planetary Gearbox:
AM-28GP
AM-32GP

Recommended Encoder:
Encoder S: AM-EN1611S***
2~3 Channels
Encoder T: AM-EN2412T***
2~3 Channels

For more combination specs, visit Assun Motor website.

Motor data tested at 25°C. Motor operation exceeding continuous limits will reduce life or result in damage.
At elevated ambient temperatures, load current must be reduced.

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